

**PENGARUH PENAMBAHAN BEBERAPA KONSENTRASI GULA TERHADAP STABILITAS WARNA EKSTRAK ANTOSIANIN BUAH RUKEM (*Flacourtia rukam* Zoll. & Mor.) YANG TERPAPAR CAHAYA LAMPU FLUORESENS**

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***EFFECT OF VARIOUS CONCENTRATION SUGAR ADDITION ON THE COLOR STABILITY OF RUKEM FRUIT ANTHOCYANIN EXTRACT (*Flacourtia rukam* Zoll. & Mor.) TOWARDS FLUORESCENT LIGHT***

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**ABSTRACT**

*This study aims to determine the effect of adding sugar with varying concentrations to the color stability of anthocyanin extract of rukem fruit exposed to fluorescent lamp lights based on color degradation kinetics and determining the optimal sugar concentration to improve color stability of anthocyanin extract of rukem fruit. Variation of sugar concentration were 20%, 40% and 60% (w/v). The color stability test was performed on the anthocyanin extract of rukem fruit which was irradiated for 10 hours with the light intensity of 3580 lux, 4655 lux, and 8544 lux. The method used is degradation kinetics modeling, where the value of the degradation rate constant (k) and half-life value ( $t_{1/2}$ ) are calculated according to the appropriate reaction order. The results showed that sugar addition at 20% could increase the stability of rukem fruit anthocyanin extract compared to control (without sugar addition), reflected from increasing of half-life from 54,82 hours to 61,35 hours. However, in the addition of 40% sugar and 60% the color stability decreased with the half-life decline from 42,52 hours to 31,66 hours. The tendency of increase and decrease the same half-life also occurs at the intensity of light 4655 lux and 8544 lux.*

**Keywords:** anthocyanin, color stability, fluorescent light, rukem fruit, sugar addition